

# **Department of Homeland Security**



**Cybersecurity Education & Awareness Branch (CE&A)**

**National Initiative for Cybersecurity Education (NICE)**

## **THE NATIONAL CYBERSECURITY WORKFORCE FRAMEWORK COMMUNICATIONS TOOLKIT**



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## INTRODUCTION

The Workforce Framework will help you and your organization. It is the foundation for increasing the size and capability of the US cybersecurity workforce. When degrees, jobs, training and certifications are aligned to the Workforce Framework...

- **Colleges** can create programs that are aligned to jobs
- **Students** will graduate with knowledge and skills that employers need
- **Employers** can recruit from a larger pool of more qualified candidates
- **Employees** will have a better defined career path and opportunities
- **Policy makers** can set standards to promote workforce professionalization

This communication toolkit contains materials and verbiage that you can use to:

1. Promote and advocate for National Cybersecurity Workforce Framework (Workforce Framework) adoption and implementation in your organizations and your communities.
2. Communicate the benefits of the Workforce Framework to your suppliers, customers, partners, colleagues and associates.
3. Encourage your peers to explore the Workforce Framework and to learn about how using it will strengthen the cybersecurity workforce.

In the following you will find ready-to-use key messages and communication tools (e.g., quick tips, talking points, articles, and samples for online content, a support announcement, website language, and social media posts) that help explain and promote the Workforce Framework.

### Background

The National Initiative for Cybersecurity Education (NICE) developed the Workforce Framework to categorize and define cybersecurity work. Led by the Department of Homeland Security (DHS), NICE raises public awareness, provides a foundation for the recruitment, training, and retention of cybersecurity professionals, and promotes cybersecurity education. NICE has three components, the goals of which are:

- **Enhance Awareness** – Raise awareness and improve the Nation’s ability to be safer and more secure online.
- **Expand the Pipeline** – Increase the quality and quantity of the cybersecurity workforce by determining the merits of professionalization.
- **Evolve the Field** – Develop and maintain an unrivaled and globally competitive national cybersecurity workforce by establishing standards and strategies for cybersecurity training and professional development.



The Workforce Framework (in support of the “Evolve the Field” goal) is a national resource providing employers, educators, trainers, and policy makers a common language for describing cybersecurity work. The Workforce Framework underwent an update in 2014 to keep pace with the evolving nature of cybersecurity. The updated version was released in May 2014 and can be found on the National Initiative for Cybersecurity Careers and Studies portal (<http://niccs.us-cert.gov/>).

### **How To Use the Toolkit**

You can help spread the word about the Workforce Framework. This toolkit equips you with ready-to-use messaging and suggestions for promoting the Workforce Framework, both as a private citizen and as part of an organization.

As a private citizen, you can share the toolkit information with your communities (e.g., professional organizations, social networks, colleagues) and anyone else who may benefit.

Within your organization, you can use the toolkit information to explain the Workforce Framework benefits and describe how it can help build your organization’s cybersecurity workforce and strengthen its capabilities.

### **Tools**

- **Quick Tips** – describes how to get involved and spread the word (e.g., use social media, feature cybersecurity news).
- **Support Announcement** – use to broadcast your organization’s support of the Workforce Framework and encourage adoption and use.
- **Website Language** – feature a brief paragraph and NICE graphic on your public website to tell others about the Workforce Framework and how to access it.
- **Social Media Messages** – share sample messages and links to spread the word about the Workforce Framework in social media (e.g., Facebook, Twitter).
- **Articles** – share brief, sample articles that highlight specific topics (e.g., job search tips, cybersecurity career facts) and connect readers to the Workforce Framework.
- **Talking Points** – use in presentations, meetings, conversations to raise awareness about the Workforce Framework and its benefits.



### QUICK TIPS

Here are ways you can spread the word about the Workforce Framework.

- **Send an email.** Direct your peers to the National Initiative for Cybersecurity Careers (NICCS) website ([www.niccs.us-cert.gov/](http://www.niccs.us-cert.gov/)). The Workforce Framework and User Guide can be found under the Training tab (<http://niccs.us-cert.gov/training/training-home>).
- **Use social media.** Announce that your organization is using the Workforce Framework. Share links to the Workforce Framework and supporting resources.
- **Share cybersecurity news.** Forward news and articles that you see about developments in cybersecurity (e.g., careers, workforce development best practices). The Workforce Framework is a great reference for understanding the various types of cybersecurity work.
- **Host a cybersecurity event.** Generate discussions about cybersecurity workforce development – in person or through social media – to encourage your communities to learn about the Workforce Framework.
- **Invite others.** Encourage others to sign up for the Workforce Framework distribution list and receive updates by sending an email to [niccs@hq.dhs.gov](mailto:niccs@hq.dhs.gov).
- **Visit the NICCS™ Portal.** Explore cybersecurity education and awareness updates, and training resources on the NICCS website ([www.niccs.us-cert.gov](http://www.niccs.us-cert.gov)).



Websites, social media, and blogs are efficient ways of reaching a wide audience. As a result, they are excellent avenues for announcing your support of the Workforce Framework and raising awareness about its benefits. You can customize and use the following content in various online formats (e.g., websites, social media).

### SUPPORT ANNOUNCEMENT (Sample)

The announcement below communicates your organization's support of the Workforce Framework and raises awareness of its benefits. Customize it by entering your organization's name in the placeholders and publish it on your organization's public outlets (e.g., website, newsletters, blogs).

*[Organization] Endorses the National Cybersecurity Workforce Framework.*

[Organization] announced today that it is adopting and aligning to the National Cybersecurity Workforce Framework (Workforce Framework). The Workforce Framework is the foundation for increasing the size and capability of the US cybersecurity workforce. When degrees, jobs, training and certifications are aligned to the Workforce Framework...

- Collages can create programs that are aligned to jobs
- Students will graduate with knowledge and skills that employers need
- Employers can recruit from a larger pool of more qualified candidates
- Employees will have a better defined career path and opportunities
- Policy makers can set standards to promote workforce professionalization

The Workforce Framework is the keystone in the National Initiative for Cybersecurity Education (NICE). NICE is led by the Department of Homeland Security and aims to build and maintain a highly skilled cybersecurity workforce to protect our nation.

[Organization] has partnered with the Department of Homeland Security to implement the Workforce Framework. Go to the National Initiative for Cybersecurity Careers and Studies (NICCS™) website ([www.niccs.us-cert.gov](http://www.niccs.us-cert.gov)) to learn how you can use the Workforce Framework. There, you'll find an interactive version of the Workforce Framework and other helpful resources.



### WEBSITE LANGUAGE (Sample)

You can feature the Workforce Framework “cube” graphic (below) on your website along with the following statement:

The Workforce Framework is the foundation for increasing the size and capability of the US cybersecurity workforce. [Organization] has partnered with the Department of Homeland Security to implement the Workforce Framework. Go to the National Initiative for Cybersecurity Careers and Studies (NICCS™) portal ([www.niccs.us-cert.gov](http://www.niccs.us-cert.gov)) to learn how you can use the Workforce Framework. There, you’ll find an interactive version of the Workforce Framework and other helpful resources.





### SOCIAL MEDIA MESSAGES (Samples)

Social media (e.g., Facebook, Twitter) users share short messages and/or links, enabling efficient communication with their communities (e.g., colleagues, professional associations, friends). Easy access from computers, tablets, and smartphones further enhances social media's appeal.

You can use social media to raise awareness about the Workforce Framework and share links to resources by posting brief messages to your networks.

#### Facebook

- The Workforce Framework is the foundation for increasing the size and capability of the US cybersecurity workforce. Check it out at <http://go.usa.gov/K7EP>. #cybersecurity
- Proud to use the DHS National Cybersecurity Workforce Framework! Check it out at <http://go.usa.gov/K7EP>. #cybersecurity
- Strengthen our nation's cybersecurity workforce! Learn about the National Cybersecurity Workforce Framework at [www.niccs.us-cert.gov](http://www.niccs.us-cert.gov). #cybersecurity
- Learn how you can use the National Cybersecurity Workforce Framework to build your cybersecurity workforce (<http://go.usa.gov/K7EP>)! #cybersecurity

#### Twitter

- The Workforce Framework is the foundation for increasing the size and capability of the US cybersecurity workforce. <http://go.usa.gov/K7EP>. @Cyber
- Our organization helped shape the #DHS National Cybersecurity Workforce Framework. Check it out <http://go.usa.gov/K7EP>. @Cyber @DHSgov [*Use if your organization participated in NICE focus groups or validation sessions*]
- The #DHS Workforce Framework provides a foundation and common language for describing cybersecurity work: <http://go.usa.gov/K7EP>. @Cyber
- #DHS and #NICE released the updated Workforce Framework. Check it out here: <http://go.usa.gov/K7EP>. @Cyber @DHSgov
- The key to ensuring our nation's cyber resiliency is maintaining an effective #cybersecurity workforce #DHS #NICE <http://go.usa.gov/K7EP>
- The Workforce Framework helps build and maintain our nation's skilled #cybersecurity workforce <http://go.usa.gov/K7EP>. @Cyber @DHSgov



## ARTICLES

Depending on your need, these articles can be shared by your organization (e.g., website, blog, and newsletter).

### *Find a fulfilling career in the growing field of cybersecurity!*

Would you like to have a career with tremendous development opportunities in a rapidly growing field that also helps protect the nation? Become a cybersecurity professional!

There are thousands of cybersecurity jobs across the country, so opportunity abounds! The field will grow 22% by 2020 and salaries are highly competitive<sup>1</sup>. Salaries can range between \$70,000 - \$118,000 and up<sup>1</sup>. You could be a software analyst, architect, developer, engineer, investigator, researcher, programmer, operator, or executive. Usually, cybersecurity careers require some higher education, and continuous learning throughout your career (hackers never stop learning new tricks, so you shouldn't either!).

As a cybersecurity professional, you might...

- Create and shape organizations' digital strategies.
- Ethically hack computer systems and networks to determine weak spots.
- Manage databases that store essential and secret information.
- Design secure software that runs on mobile devices and computers around the world.
- Evaluate and manage the acquisition of secure hardware.

See which cybersecurity specialties appeal to you by exploring the **National Cybersecurity Workforce Framework** (<http://niccs.us-cert.gov/training/tc/framework/specialty-areas>). It provides a common language to describe cybersecurity work across the nation.

Find guidance on starting a career, resources to find jobs, and tools to stay current with today's fast paced cybersecurity specialties at the National Initiative for Cybersecurity Careers and Studies (NICCS) website (<http://niccs.us-cert.gov/>). Find career opportunities at DHS and other organizations by exploring the Careers section of NICCS (<http://niccs.us-cert.gov/careers/careers-home>).

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<sup>1</sup> <http://www.usnews.com/education/online-education/cyber-security-bachelors-degree>



### *Make searching for a cybersecurity job easier!*

Searching for a job can be a daunting task. Make it easier!

A key step in a cybersecurity job search is identifying specialties that match your aspirations. You can do this by exploring the comprehensive cybersecurity specialties and required skills described within the **National Cybersecurity Workforce Framework** (<http://niccs.us-cert.gov/training/tc/framework/overview>). The Workforce Framework provides a common language to describe cybersecurity work across the nation.

Another important step to finding a cybersecurity job is to identify where you can get job information and assistance. The National Initiative for Cybersecurity Careers and Studies (NICCS) career portal (<http://niccs.us-cert.gov>) provides resources such as links to popular job search websites. Visit NICCS today for additional resources to support your search.

Here are some tips for a successful cybersecurity job search:

- Know cybersecurity terminology. The NICCS glossary (<http://niccs.us-cert.gov/glossary>) will help you learn terminology which may appear in job descriptions.
- Identify where to find a job. The NICCS Careers portal (<http://niccs.us-cert.gov/careers/careers-home>) provides links to job search websites that are pre-filtered to display cybersecurity jobs.
- Research salary ranges. Cybersecurity salaries can range between \$70,000 - \$118,000 and up <sup>1</sup>.
- Recognize diverse career opportunities. Cybersecurity professionals work across sectors, from finance to health care, performing a range of functions <sup>1</sup>.

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<sup>1</sup> <http://www.usnews.com/education/online-education/cyber-security-bachelors-degree>



***Cybersecurity professionals! Set yourself apart by developing your management or technical expertise.***

Would you like to take your career to the next level? Take advantage of the diverse opportunities that await you as a cybersecurity professional.

Find the education and training courses you need to keep up with today's fast paced cybersecurity specialties, expand your career goals, get a promotion, and increase your pay! Visit National Initiative for Cybersecurity Careers and Studies (NICCS) Training Catalog (<http://niccs.us-cert.gov/training/tc/search>) for a listing of cybersecurity or cybersecurity-related education and training courses offered in the U.S. NICCS enables you to search for training by specialty area, keyword, proficiency level, location, and training provider.

Also, explore the cybersecurity specialties in the National Cybersecurity Workforce Framework (<http://niccs.us-cert.gov/training/tc/framework/overview>) to identify skills you need to build in your chosen area. The Workforce Framework provides a common language to describe cybersecurity work across the nation.



### TALKING POINTS

The Workforce Framework provides a range of benefits. Depending on your community's needs, below are talking points that provide both general and community-specific Workforce Framework benefits. You can use these tailored messages in presentations, meetings, and conversations. For detailed implementation guidance, please reference the User Guide (found on the [NICCS Training tab](#)).

#### General Benefits

- The National Cybersecurity Workforce Framework supports the nation's cybersecurity workforce development efforts.
- The National Cybersecurity Workforce Framework provides a simple, standardized way to define cybersecurity work across multiple sectors.
- The National Cybersecurity Workforce Framework provides detailed descriptions of types of cybersecurity work, the knowledge, skills, and abilities required for each area, and descriptions of common specialties.
- The National Cybersecurity Workforce Framework provides employers, employees, students, educators, trainers, and policy makers with a common language for describing cybersecurity work. When degrees, jobs, training and certifications are aligned to the Workforce Framework...
  - Students will graduate with the knowledge and skills that employers need,
  - Colleges can create programs that are aligned to jobs,
  - Employers will recruit from a larger pool of more qualified candidates,
  - Employees will have a better defined career path and opportunities, and
  - Policy makers can set standards to promote workforce professionalization.



### Community-Specific Benefits

Community	Key Messages
<p><b>Employers</b></p>	<ul style="list-style-type: none"> <li>• The Workforce Framework provides a simple, standardized way to define cybersecurity work across multiple sectors. The Workforce Framework provides a foundation organizations can use to develop position descriptions, design competency models, and create training.</li> <li>• Many organizations recognize the importance of hiring cybersecurity professionals but are not clear on how to hire the best professionals. The Workforce Framework helps organizations attract the best and brightest by helping HR and human capital managers understand the key knowledge, skills, and abilities cybersecurity professionals should possess.</li> <li>• Employers can use the Workforce Framework to determine the cybersecurity capabilities of their workforce. The Workforce Framework can be used to assess current and future cybersecurity needs, and develop mitigation strategies to address gaps.</li> <li>• Employers may not have the resources or knowledge to develop their own position descriptions and training programs. The Workforce Framework contains language that can be used for these purposes.</li> </ul>
<p><b>Employees</b></p>	<ul style="list-style-type: none"> <li>• Professionals looking for a cybersecurity job can greatly benefit from a centralized resource that provides comprehensive, nationally validated information about the cybersecurity field. The National Cybersecurity Workforce Framework helps job seekers interested in a cybersecurity career. It provides detailed descriptions of types of cybersecurity work and defines the knowledge and skills required for each area. This knowledge helps professionals narrow their search and better understand which jobs will fit their aspirations.</li> <li>• Cybersecurity is a rapidly evolving field with dynamic opportunities. Cybersecurity professionals can take advantage of these opportunities by acquiring the skills and knowledge needed for new jobs or to take their current work to the next level. Use the Workforce Framework to identify the skills needed in your chosen area, and identify your strengths and which skills you can benefit from developing.</li> </ul>



Community	Key Messages
<b>Students</b>	<ul style="list-style-type: none"><li>• Students interested in cybersecurity need a timely, credible resource that they can use to learn about the kind of knowledge, skills, and abilities required to be a successful cybersecurity professional. The National Cybersecurity Workforce Framework is this resource! It provides common terminology, job searching information, and descriptions of Specialty Areas within cybersecurity that can help students decipher job descriptions and plan for a future in cybersecurity.</li><li>• Students can better prepare for a career in cybersecurity by seeking out additional training or certifications. The Workforce Framework can help students identify coursework or training that can best prepare them for their ideal cybersecurity job.</li></ul>
<b>Academic Institutions / Educators</b>	<ul style="list-style-type: none"><li>• Cyber related positions require strong education. To prepare our students for these positions, we must shaping curricula around a common language and understanding of what cybersecurity is. To do so, all educators can use information found in the National Cybersecurity Workforce Framework, which categorizes and defines cybersecurity work.</li><li>• Students can better assess the preparation and education needed for cybersecurity careers if they get a preview of what it is like to work in cybersecurity. Educators can refer their students to the Workforce Framework for examples of real-world activities in the cybersecurity field.</li><li>• The goal of an academic institution is to prepare students for a successful career upon graduation. A resource that helps our students prepare for careers is the National Cybersecurity Workforce Framework. It plays an important role for future cybersecurity professionals by providing information on hands-on learning and internship opportunities, and outlining key cybersecurity knowledge and skills.</li></ul>



Community	Key Messages
<b>Training Vendors / Professional Training and Certification Organizations</b>	<ul style="list-style-type: none"><li>• The field of cybersecurity is evolving rapidly and the way cybersecurity work is defined varies widely. Professional training organizations can resolve this challenge by using the Workforce Framework’s structure and content to develop curricula. They can also map their courses to the Workforce Framework’s Specialty Areas on the National Initiative for Cybersecurity Careers and Studies (NICCS) website. By aligning training to one source, organizations can reach a greater number of learners across sectors and the nation.</li><li>• Finding credible and timely resources to develop cybersecurity training can be challenging. If organizations do not have the resources to develop their own training programs and courses, they can locate training resources on the NICCS website. Courses in the Training Catalog are linked to the Workforce Framework’s Specialty Areas – this Catalog is a centralized resource for locating cybersecurity training and is growing!</li></ul>